CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR.7/900/CEMENT/2015-16 Date: 22.07.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Technical Manager (West),** KRIDL, Bangalore.
*NAME OF THE WORK	:	Improvements to roads and drains near Byraveshwara circle surrounding in Royal enclave and Meenakshi Layout Bagalagunte in Ward No.14, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.07.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	20.07.2015
PERIOD OF TESTING	:	20.07.2015 to 22.07.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

Note:

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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VISHWANATH. I.A.
Chief Executive Officer

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR.7/900/SAND-Gradation/2015-16 : 22.07.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Improvements to roads and drains near Byraveshwara circle surrounding in Royal enclave and Meenakshi Layout Bagalagunte in Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.07.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 20.07.2015

Date of Testing : 22.07.2015

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Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.72	90-100	90-100	90-100	95-100
2.36	80.08	60-95	75-100	85-100	95-100
1.18	57.61	30-70	55-90	75-100	90-100
600 Micron	26.09	15-34	35-59	60-79	80-100
300 Micron	13.44	5-20	8-30	12-40	15-50
150 Micron	6.17	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

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Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR.7/900/AGG/GR/2015-16 : 22.07.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Improvements to roads and drains near Byraveshwara circle surrounding in Royal enclave and Meenakshi Layout Bagalagunte in Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.07.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 20.07.2015

Date of Testing : 22.07.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.85	95-100	85-100
20	48.15	30-70	0-20
10	25.30	10-35	0-5
4.75	2.90	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR.7/900/CC Solid Block/2015-16 : 24.07.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of the Work : Improvements to roads and drains near Byraveshwara circle surrounding in Royal enclave and Meenakshi Layout Bagalagunte in Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.07.2015

Sample Received on : 20.07.2015

Date of Testing : 24.07.2015

Size of Blocks : 400mm x 200mm x 200mm

Cross Sectional Area : 80000 mm^2

Technical Reference : IS: 2185 (Part 1) - 2005

No. of Blocks Tested : 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	35.92	263.5	3.29	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	36.24	260.4	3.26	
3	Block 3	34.58	262.7	3.28	
4	Block 4	35.63	261.3	3.27	
5	Block 5	34.87	263.8	3.30	
6	Block 6	35.48	264.2	3.30	
7	Block 7	36.54	262.8	3.29	
8	Block 8	35.37	261.5	3.27	

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR.7/900/CUBE/2015-16 29.08.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of the work** : Improvements to roads and drains near Byraveshwara circle surrounding in Royal enclave and Meenakshi Layout Bagalagunte in Ward No.14, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.07.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as o: 28^{th} day

Sample Received on : 01.08.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	01.08.2015	29.08.2015	8.257	483.6	21.49
2	01.08.2015	29.08.2015	8.363	496.3	22.06
3	01.08.2015	29.08.2015	8.458	508.2	22.59

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR.7/900/Pre slab/2015-16 06.08.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

* Name of Client	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Improvements to roads and drains near Byraveshwara circle surrounding in Royal enclave and Meenakshi Layout Bagalagunte in Ward No.14, BBMP, Bangalore.
Referece	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.07.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample received on	:	01.08.2015
Date of Testing	:	06.08.2015
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	76.00	0.392	2626.89	1.52	0.954	32.91	16.76	18.10	17.27	21.59
2	50.00	75.00	0.384	2607.59	1.50	0.950	32.46	16.53	17.85	16.96	21.20
3	50.00	82.00	0.402	2496.79	1.64	0.965	33.25	16.93	18.29	17.65	22.06

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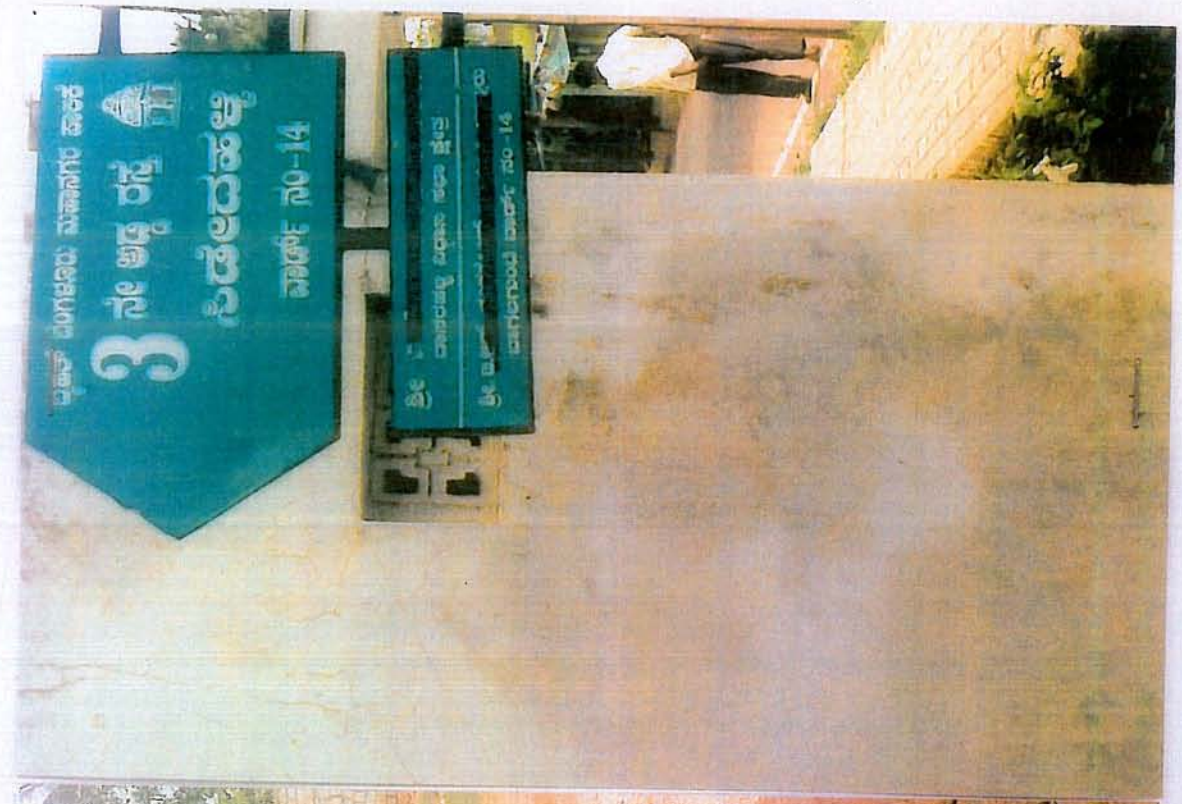
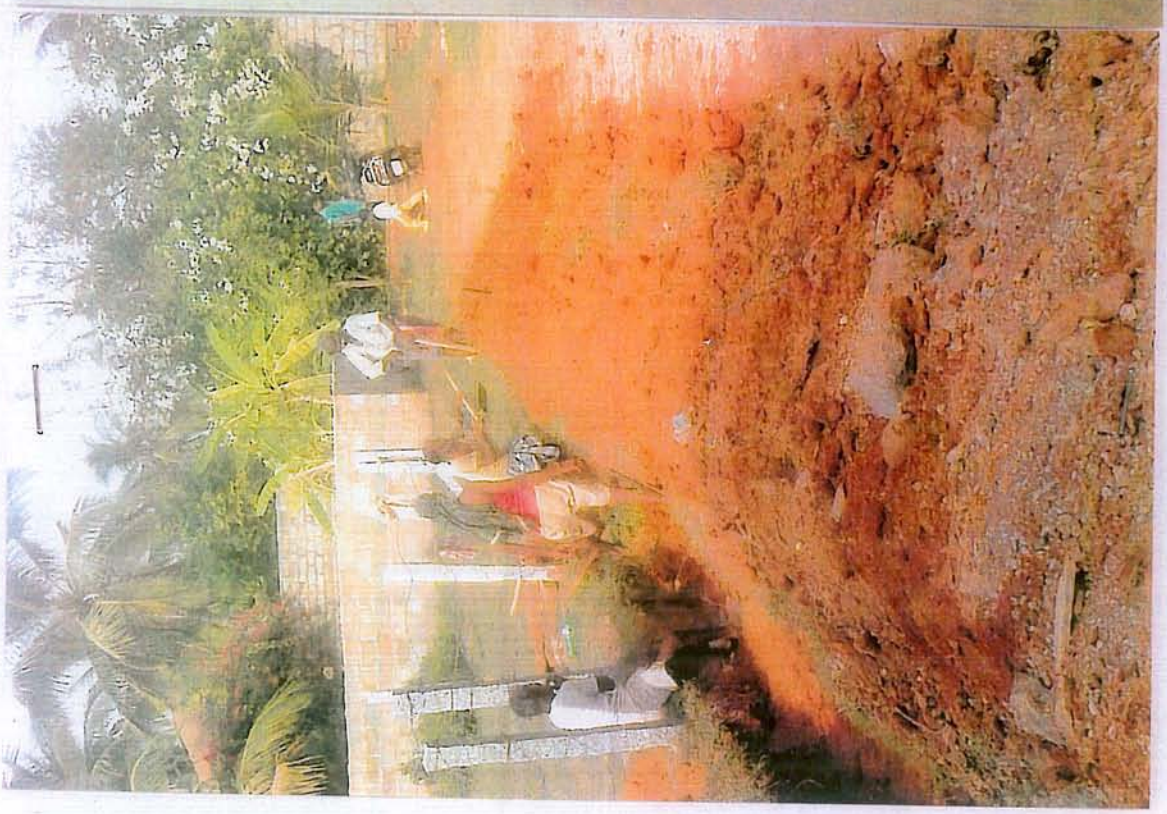
Improvements to roads & drains near Byrateshwara Circle Surrounding in Royal enclave & Heemakshi Lay-out bagalagunte in ward No 14





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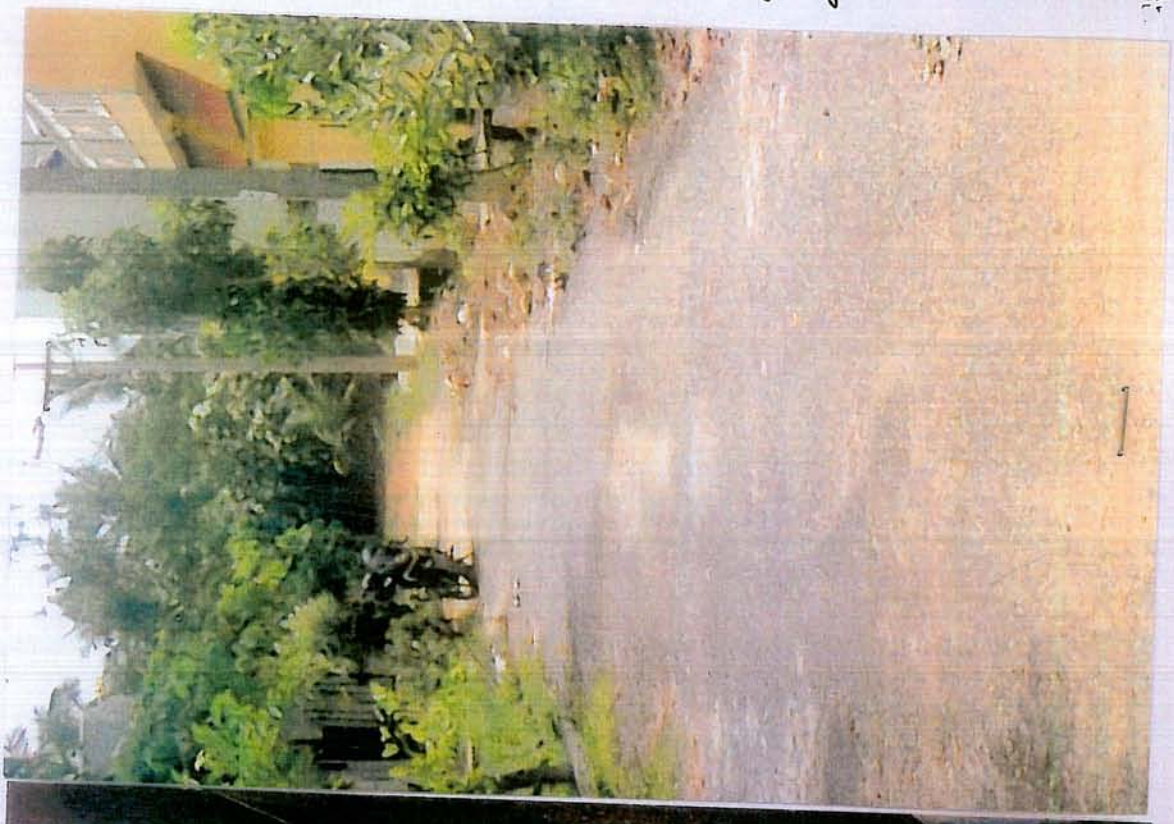
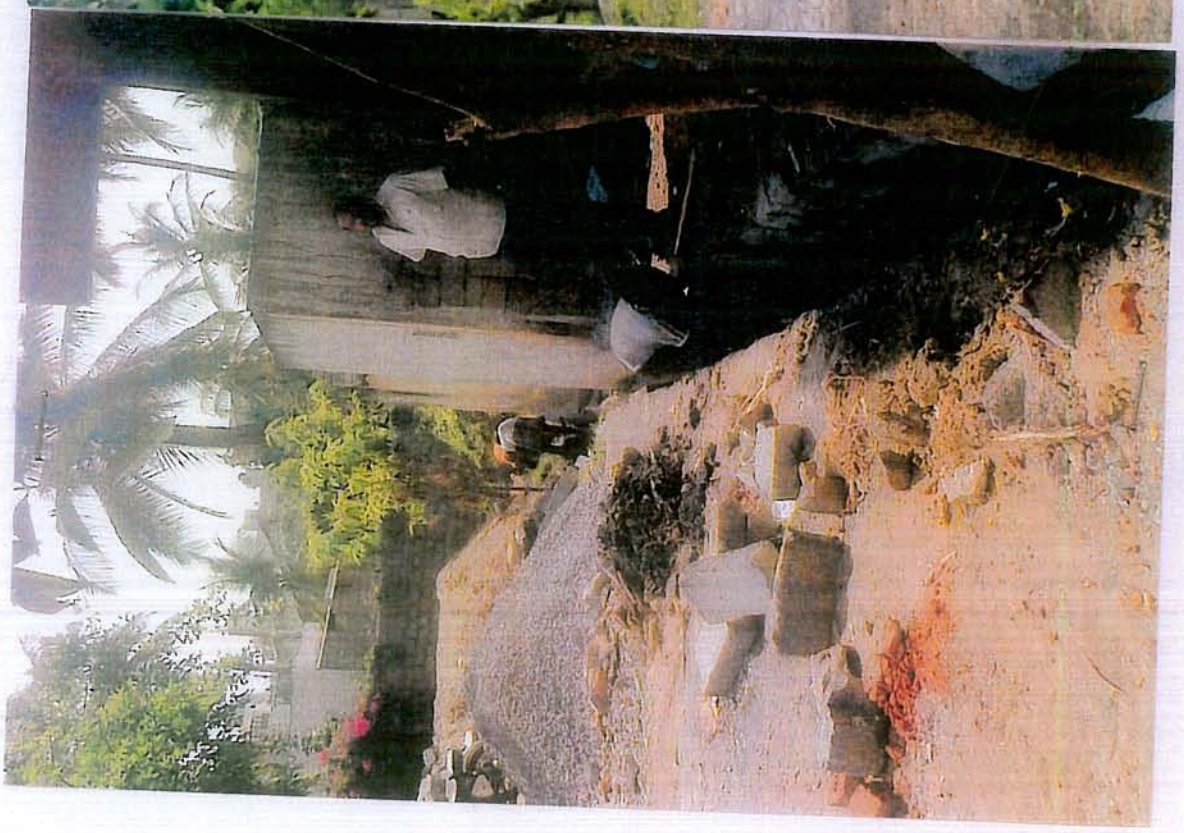
ಸಾಗಲಗುಂಟೆ, ಬೆಂಗಳೂರು - 560 073

Improvements to roads & drains near Byrateshwara Circle Surrounding in Royal enclave & Meenakshi Lay-out bagalgunte in ward No 14





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Improvements to roads & drains near Byrateshwara Circle Surrounding in Royal enclave & Heenakshi Lay-out Bayabyrute in ward No 14

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ಖಾಲಲಗುಂಟೆ, ಬೆಂಗಳೂರು - 560 073.

Improvements to roads & drains near Byrasandra Circle surrounding in Royal enclave & Hemalathi Lay-out Jagajyothi in ward No 14

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
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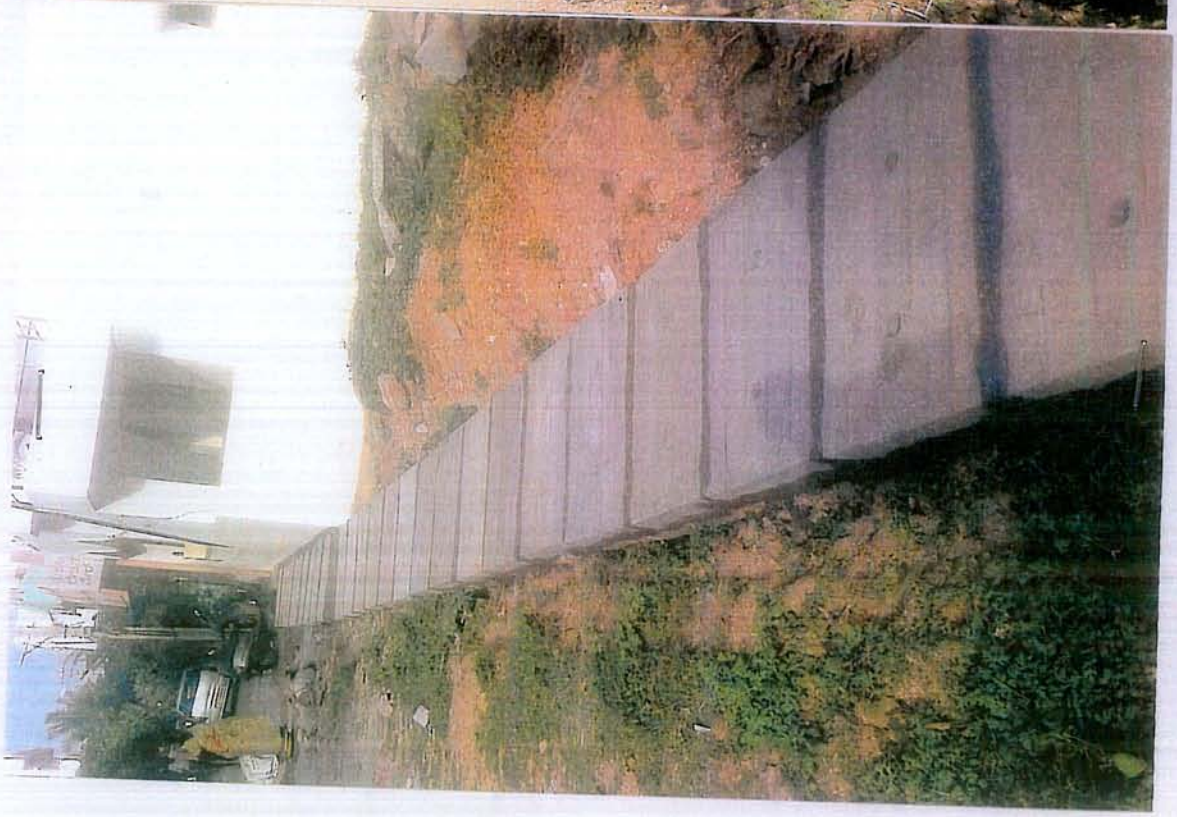
Improvements to roads & drains near Byrathiswara Circle Surrounding in Royal enclave & Hemalathi Lay-out Bagalagunte in ward No 14



Improvement works of Drains near Byrathikuppa Circle Surrounding in Royal enclave & Heemalathi Lay-out Bagalagunte in ward No 14

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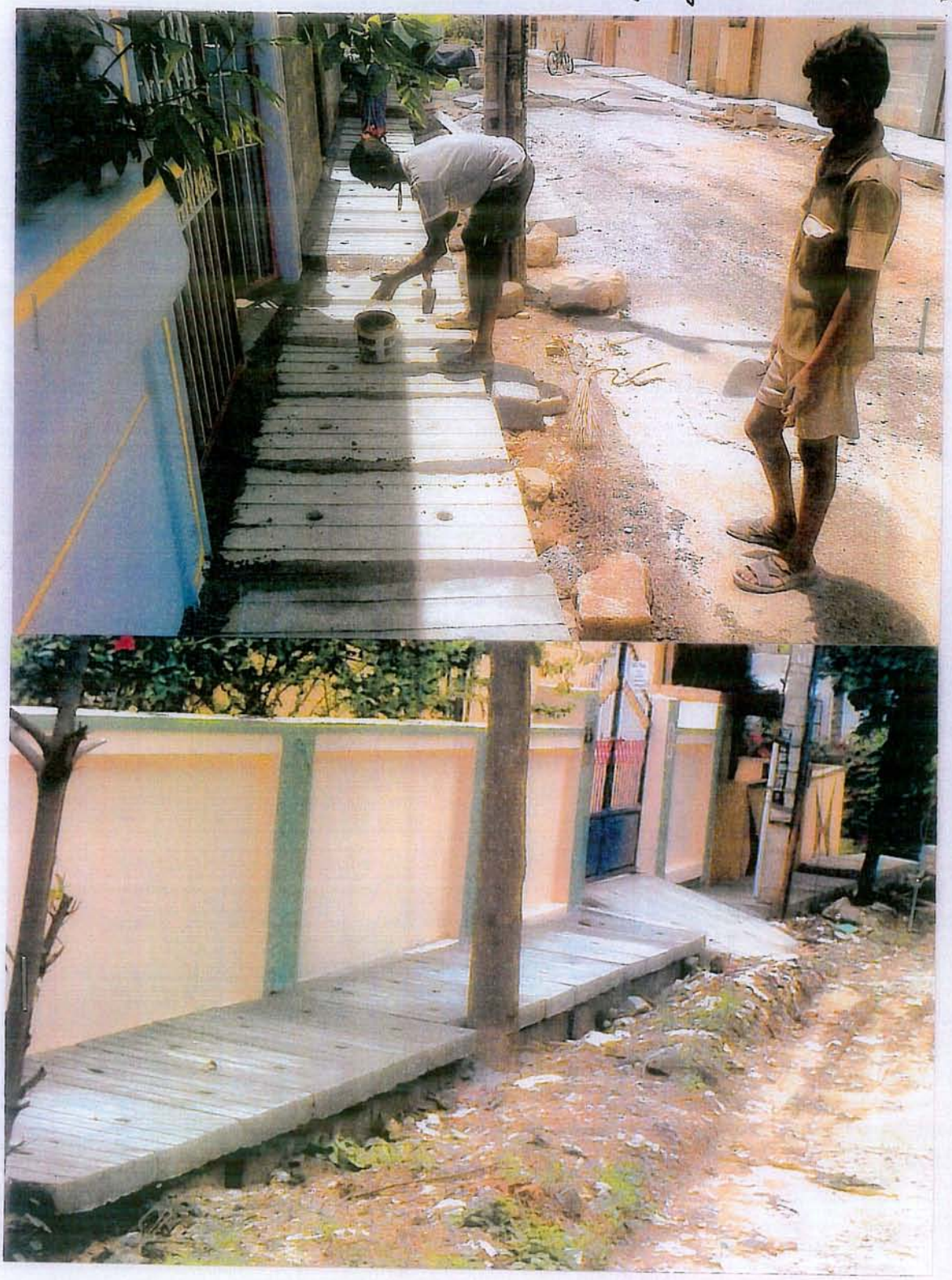

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